

# Am I Speeding?

DiPS CodeJam 24

---

## Prompt

---

Here is a simple road:

**4=====**

The 4 means that I cross 4 unit distances per second. The road has 5 '=', so this means that time I need to cross the road is  $\frac{5}{4} = 1.25s$ .

Here is a more complex road:

**3=====7=====4==**

I cross 4 unit distances at 3u/s, 10 unit distances at 7u/s and 2 unit distances at 4u/s. So the time I take to cross the road is  $\frac{4}{3} + \frac{7}{10} + \frac{2}{4} = 1.33 + 0.7 + 0.5 = 2.53s$ . If the numbers represented the speed limits, the minimum time required to cross the road is 2.35s.

Given a road like the ones above and the time I took to cross the road, can you tell me if I was speeding?

## Input Format

- The first line of the input contains an integer  $n$ , denoting the number of test cases.
- Each test case comprises of two lines – the first line contains a decimal  $m$ , denoting the time I take to cross the road, and the second line contains the road itself.

## Output Format

The first and only line of your output must contain a single integer  $s$ , denoting the number of times I was speeding.

## Constraints

- $10^2 \leq n \leq 10^3$
- Assume single-digit speeds.

## Sample Program

---

```
def solve(t, road):
    actual_time = getTime(road)
    if t < actual_time:
        return True
    else:
        return False

def getTime(road):
    road_arr = []
    for i in road:
        if i.isdigit():
```

```
        road_arr.append([int(i), 0]) # speed, distance
    else:
        road_arr[-1][1]+=1
time = sum( [i[1]/i[0] for i in road_arr] )
return time
```